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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/798,305	03/12/2004	Takahiro Kume	742158-9	5795

25570 7590 03/12/2007
ROBERTS, MLOTKOWSKI & HOBBS
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MCLEAN, VA 22102-8064

EXAMINER

CHANG, VICTOR S

ART UNIT	PAPER NUMBER
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1771

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/798,305

Applicant(s)

KUME ET AL.

Examiner

Victor S. Chang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 4-8 and 10-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,9 and 21-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Introduction

1. Applicants' amendments and remarks filed on 2/12/2007 have been entered. Claim 1 has been amended. Claims 1-3, 9 and 21-23 are active.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. With the understanding that the term "average space volume" relates to "foam cells" (see Examiner Interview Summary mailed 1/17/2007), not the entire foam structure, the amendments to claim 1 are sufficient to overcome the 112 issues in the prior Office action mailed 11/16/2006. However, the amendment appears to introduce a new 112, 2nd paragraph, issue as set forth below. The rejection over JP 10-249729 in the prior Office action remains to be withdrawn from the present Office action, and to be reinstated, if appropriate, after the following objection over specification and rejection under 35 USC 112 are resolved. Applicants' arguments directed to JP '729 are moot.

Specification

4. The disclosure at specification, page 10, lines 11-13, is objected to under 37 CFR 1.71, as being so incomprehensible as to preclude a reasonable search of the prior art by the examiner. Specifically, the passage "These foams 3 are communicated so as to form a network by unillustrated continuous holes whose diameter is smaller than that of the space volume of the foams 3" is incomprehensible to the examiner. While it is understandable that the cells of a foam

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formed by a wet solidification process (such as the process disclosed by JP '709) contains open cells which forms a network of channels allowing coagulation liquid enters into the interior of the resin emulsion during the wet film forming process, as admitted in specification paragraph 0039 by the applicants that this is a known wet film forming process, and the abovementioned passage appears to be an attempt to describe the resultant cell structure, however, the terms used in the passage render the disclosure incomprehensible, because the structure of the term "holes" has not been defined in the specification, nor illustrated, it is unclear which part of the structure of the communicating channels it is being directed to, therefore it is indeterminable what structural diameter is being compared. For example, if the term "holes" is directed to the "channels", since the channels are inherently formed of a plurality of foam cells, then the passage appears to unreasonably compare "foam cell diameter" to "foam cell volume", assuming the phrase "space volume of foams 3" is a typo of "foam cell volume" (per the understanding reached above for entering the amendment). On the other hand, if the term "holes" is directed to the "open cell windows" between the foam cells, since the windows are inherently discontinuous, they cannot form a continuous structure as described. Finally, it is also incomprehensible how a linear dimension can be compared with a 3-D volume.

Applicant is required to submit an amendment which clarifies the disclosure so that the examiner may make a proper comparison of the invention with the prior art.

Applicant should be careful not to introduce any new matter into the disclosure (i.e., matter which is not supported by the disclosure as originally filed).

Claim Rejections - 35 USC § 112

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5. Claims 1-3, 9 and 21-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

More particularly, claim 1, lines 13-15, has been amended to recite "said network of continuous holes having an average diameter that is substantially smaller than said average space volume of the foam cells formed in the polishing layer", and a support at specification, page 10, lines 11-13, has been provided. However, since the provided support passage "These foams 3 are communicated so as to form a network by unillustrated continuous holes whose diameter is smaller than that of the space volume of the foams 3" is incompressible as set forth above, because it is unclear exactly which part of the foam structure the term "holes" is being directed to, it is vague and indefinite what diameter is being compared; and it is also vague and indefinite that how a linear dimension can be compared with a 3-D volume. Clarification is requested.

Response to Argument

6. Applicants' attorney acknowledges that he is aware of the examiner's concern (see Examiner Interview Summary mailed 1/17/2007) that the amendment to claim 1 compares a linear dimension to a three-dimensional volume, however argues that the imperceptibility of the continuous holes in micrographs of a polishing sheet embodying the invention shown in Figures 6-8, in combination with the description given in the specification, would lead a person of skill in the art to conclude that what was actually meant was that the average diameter of the holes is smaller than the average diameter of the foam cells, because if the average diameter of the holes were equal to or greater than the foam cells, the foam cells would be subsumed within the holes,

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which is not indicated in the drawings. However, since the term "holes" is not defined nor illustrated in the specification, it becomes incomprehensible what structural element in the foam structure is being compared, and the examiner is unable to make a proper comparison of the invention with the prior art.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

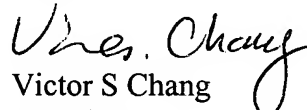
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor S. Chang whose telephone number is 571-272-1474. The examiner can normally be reached on 8:30 - 5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel H. Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Victor S Chang
Examiner
Art Unit 1771

3/7/2007